

S/N: 10/658,657

Atty Dkt No. KLAI 0101 PUS

Reply to Office Action of June 18, 2004

Amendments to the Claims:

1 - 12. (Cancelled).

13. (Currently Amended) The method of claim 7 19 wherein the ~~electrically conductive~~ photocurable composition comprises a component selected from the group consisting of silver, carbon black, a doped metal oxide, and mixtures thereof.

14. (Currently Amended) The method of claim 7 19 wherein the electrically conductive composition comprises silver powder and silver flakes in an amount of at least 20% relative to the weight of the silver powder.

15. (Currently Amended) The method in claim 7 19 wherein;

a) the photocurable organic mixture comprises:

an aliphatic acrylated urethane oligomer is present in an amount of about 3% to 8% of the total weight of the photocurable composition;

acrylated epoxy oligomer is present in an amount of about 2% to 4% of the total weight of the photocurable composition; ~~and~~

an isobornyl acrylate monomer is present in an amount of about 4% to 8% of the total weight of the photocurable composition; ~~and~~

b) ~~the electrically conductive composition comprises:~~

silver powder is present in an amount of about 50% to 60% of the total weight of the photocurable composition; and

silver flakes are present in an amount of about 25% to 35% of the total weight of the photocurable composition.

16. (Currently Amended) The method of claim ~~15~~ 19 wherein the photocurable composition further comprises a flow promoting agent.

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17. (Currently Amended) The method of claim ~~15~~ 19 wherein the electrical composition further includes a second conductive powder selected from the group consisting of carbon black and a doped metal oxide.

18. (Currently Amended) The method of claim ~~15~~ 19 wherein the substrate is a flexible substrate.

19. (Previously Presented) A method for making a heating element adhered to a substrate, the method comprising:

a) applying a photocurable composition to substrate in a pattern having one or more grid lines, the photocurable composition comprising

an aliphatic acrylated urethane oligomer;

acrylated epoxy oligomer;

an isobornyl acrylate monomer;

silver powder;

silver flakes; and

a photoinitiator, wherein the photocurable composition has less than about 10 weight % volatile organic compounds and wherein the substrate comprises a plastic that are at least partially soluble in volatile organic compounds or softened by volatile organic compounds; and

b) illuminating the photocurable composition to light for a sufficient period of time to cure the photocurable composition that has been applied to the substrate.

20. (Original) The method of claim 19 wherein the silver flakes are present in an amount of at least 20% relative to the weight of the silver powder.

21. (Original) The method of claim 19 wherein,
the aliphatic acrylated urethane oligomer is present in an amount of about 3% to 8% of the total weight of the photocurable composition;

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the acrylated epoxy oligomer is present in an amount of about 2% to 4% of the total weight of the photocurable composition; and

the isobornyl acrylate monomer is present in an amount of about 4% to 8% of the total weight of the photocurable composition;

the silver powder is present in an amount of about 50% to 60% of the total weight of the photocurable composition; and

the silver flakes are present in an amount of about 25% to 35% of the total weight of the photocurable composition.

23. (Original) The method of claim 19 wherein the pattern further includes one or more busbars from which the one or more gridlines extend.

24. (Original) The method of claim 19 wherein the pattern comprises a first busbar and a second busbar wherein the one or more gridlines extend between and are in electrical contact with the first busbar and the second busbar.

25. (Original) The method of claim 19 wherein the substrate is a flexible substrate.

26-48. (Cancelled)